

coarser plant with leaves up to 6 mm. broad and transversely marked, and the scapes are rounded in section with 5 or 6 longitudinal channels; while *X. pauciflora* is more slender, with leaves up to 1.5 mm. broad, and scapes terete and striated. Both species range across tropical Australia and into south-east Asia.

It is most probable that two other much smaller annual species are native also in tropical areas of Western Australia, for they have been recorded in the Northern Territory and Queensland. *X. pusilla* R.Br. has broad short spreading leaves and the scapes are two-angled beneath the spike; and *X. oligantha* Steud. has erect narrow reddish leaves and the scapes 4-angled. Each is only a few inches in height.

WESTERN AUSTRALIAN PEARL SHELLS

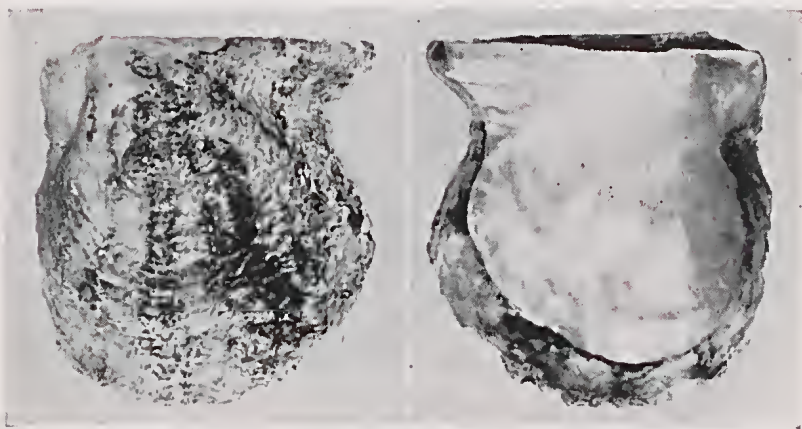
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The Pearl Shells belong to the family Pteriidae and there are four genera: *Austropteria*, with a long wing developed along the hinge; *Magnavicula*, with a shorter wing; *Pinctada*, without a wing, and *Electroma*, small and delicate, without a wing. The first genus, *Austropteria*, has not been recorded from Western Australia.

In Hedley's "A Preliminary Index of the Mollusca of Western Australia" (*Journ. Roy. Soc. W.A.*, vol 1, 1916), a dozen species appear under this family name.

Malleus malleus Linne, 1758. Coral Hammer. This is the coral reef species. *Malleus albus* Lamarck, 1819, the White Hammer, should be added as this is the Northern and North-western mainland species.

Malleus regulus Forskal, 1775. Bean Hammer. The species comes from the Philippines and belongs to the genus *Parimalleus*



Sharks Bay Pearl Shell, from Albany, natural size.

in which the shells are elongate but the hinge line is not produced laterally and the hinge is toothless. Brazier, 1884, records it from Cossack under the name *Malleus vulsellatus* Lamarek. These two species belong to the family *Vulsellidae*.

Pteria maeroptera Lamarek, 1819. Black Band Wing Pearl Shell. This belongs to the genus *Magnavieula*.

Pinetada zebra Reeve, 1857. Zebra Wing Shell. This species came from Moreton Bay, Queensland, but the Western Australian species may be *Avieula physoides* Lamarek, 1819, *Anim. S. Vert.*, VI, p. 149. Described from North Australia another possible name is *Avieula virens* Lamarek, 1819, described on p. 150 of the same publication, from North-western Australia.

These three specific names are listed as *Pinctada*, but *zebra*, *physoides*, and *virens* belong to the genus *Electroma*.

More than a dozen true pearl shells of the genus *Pinetada*, genotype *P. margaritifera* Linne, 1758, have been recorded from Australia. Most of them occur in the north but one species, *P. perviridis* Reeve, 1851, the Southern Pearl Shell, lives in New South Wales. Western Australian species appear in Hedley's Index under the following names.

Pinetada margaritifera Linne, 1758. Black Lip Pearl Shell of the Indo-Pacific. This is closely related to the smaller Australian Black Lip, *P. nigromarginata* Saville Kent, 1893, described from Thursday Island, Torres Straits. These two are distinguished one from the other by pearl traders and again from the more valuable commercial *P. maxima* Jameson. *P. margaritifera* has been listed by various authors from South Australia, Western Australia and Victoria, all of which records are probably erroneous.

P. maxima Jameson, 1901. Golden Lip or Silver Lip. Described from Moresby Island, British New Guinea and plentiful in Torres Straits, occurs in North-western Australia.

Pinetada sugillata Reeve, 1857. Sugillate Pearl Shell. Described from Cape Hillsborough, North Australia. Synonyms are *P. fimbriata* Reeve, 1857, and *P. reeveana* Dunker.

Pinetada vulgaris Schumacher, 1817. Probably a West Indian species difficult to determine.

Pinetada carchariarum Jameson, 1901. Shark's Bay Pearl Shell. This species was once collected at Shark's Bay for pearls, but is now used only for manufacture into small buttons. We have dead or subfossil specimens from the Abrolhos and it is in quantity as a subfossil in raised beaches at Murat Bay, South Australia. I took living specimens of what appears to be this species at Leighton and Mrs. E. R. Stubbs found it at Albany early in April, 1953, washed up on the ocean beach after a heavy blow. Western Australian naturalists should search for this pearl shell and compare South-western and North-western specimens as the true *P. carchariarum* appears to be somewhat larger and thicker than the southern shell.